

# WHAT IS CLAIMED IS:

1. A solid-state image pick-up device provided with a pixel for distinguishing a light source type in a predetermined region of the solid-state image pick-up device, wherein a filter for transmitting a light having at least a wavelength of 520 nm or 580 nm is provided as a filter for distinguishing a light source type to be mounted on the pixel for distinguishing a light source type.

2. The solid-state image pick-up device according to claim 1, wherein the filter for distinguishing a light source type also serves to transmit a light having a wavelength of 640 nm or more.

3. The solid-state image pick-up device according to claim 1 or 2, wherein the predetermined region is an invalid pixel region of the solid-state image pick-up device.

4. An image pick-up apparatus comprising an optical lens system, the solid-state image pick-up device according to any of claims 1 to 3 which serves to convert a light signal incident through the optical lens system into an electric signal, and control means for processing a signal charge read from the pixel for distinguishing a light source type of the solid-state image pick-up device to distinguish a photographing light source type and for automatically adjusting a white balance of a color pick-up image of the solid-state image pick-up device.

5. A digital camera comprising color image pick-up means for picking up a color image of an object and signal processing means for separating a color signal output from the color image pick-up means into a luminance signal and a color difference signal and multiplying the color difference signal by a color difference matrix, thereby carrying out a color correction, wherein there is provided color difference matrix switching

means for preparing a color difference matrix obtained when a photographing light source is a sunlight and a color difference matrix obtained when the photographing light source is a specific light source other than the sunlight and switching the color difference matrix depending on whether a light source in the photographing is the sunlight or the specific light source, thereby carrying out the color correction.

6. The digital camera according to claim 5, wherein the specific light source is an F6 light source.

7. The digital camera according to claim 5, wherein the specific light source is an F12 light source.

8. The digital camera according to claim 5, wherein the specific light source includes an F6 light source and an F12 light source, each of color difference matrices for the F6 light source and the F12 light source is prepared as the color difference matrix for the specific light source, and the switching means switches the color difference matrix depending on whether the specific light source is the F6 light source or the F12 light source, thereby carrying out the color correction.

9. The digital camera according to any of claims 5 to 8, further comprising a light source type distinction sensor, the switching means automatically switching a color difference matrix based on a result of detection of the light source type distinction sensor.

10. The digital camera according to claim 9, wherein the light source type distinction sensor is incorporated integrally with the color image pick-up means.